

#0
03/13/03

2156

In the United States Patent and Trademark Office

Application No: 09/336,990

Filing Date: 06/21/1999

Applicant: Jia Xu

Title: A Method of Scheduling Executions of
Periodic or Asynchronous Real-Time
Processes Having Hard or Soft
Deadlines

Art Unit: 2156

Examiner: Kenneth Tang

RECEIVED

FEB 03 2003

Technology Center 2100

Mailed: January 30, 2003

At: Toronto, Canada

Information Disclosure Statement

Commissioner for Patents
Washington, D.C. 20231

Sir:

Attached is a completed Form PTO/SB/08 and copies of the pertinent parts of the references cited thereon.

Very respectfully,

Jia Xu, Applicant Pro Se

Enclosures: PTO/SB/08 & References

Applicant's Address:

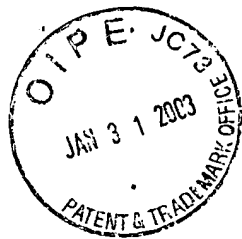
1 Gilgorm Road

Toronto, Ontario

Canada M5N 2M4

Tel: (416) 322-8396

E-mail: jxu@cs.yorku.ca



PTO/SB/08B (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		Complete if Known			
		Application Number	09/336,990		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Filing Date	06/21/1999		
		First Named Inventor	Jia Xu		
		Group Art Unit	2156		
		Examiner Name	Kenneth Tang		
Sheet	2	of	3	Attorney Docket Number	

RECEIVED
FEB 03 2003
Technology Center 2100

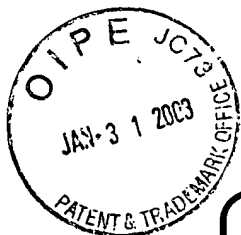
OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ²	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	3	N. C. AUDSLEY, et al, "The end of the line for static cyclic scheduling?" Proc. Fifth Euromicro Workshop on Real-Time Systems, 36-41, 1993.	
	4	N.C. AUDSLEY et al, "Putting fixed priority scheduling theory into engineering practice for safety critical applications", 2 nd IEEE RTAS'96, Boston, June 1996, p.2-10.	
	5	N.C. AUDSLEY, et al, "On fixed priority scheduling, offsets and co-prime task periods", Information processing letters, 67, 1998, p.65-69.	
	6	T. P.BAKER, et al, "The cyclic executive model and Ada," Journal of Real-Time Systems, vol. 1, p.7-25, June 1989.	
	7	A. BURNS, et al, "Generating Feasible Cyclic Schedules", Control Engineering Practice, vol. 3, No. 2, 1995, p.151-162.	
	8	A. BURNS, "Preemptive priority-based scheduling: an appropriate engineering approach", in Advances in Real-Time Systems, Ed. By S. H. Son, Prentice Hall, 1995, p.225-248,	
	9	A. BURNS, et al, "Effective analysis for engineering real-time fixed priority schedulers," IEEE Trans. Software Eng., 21, 475-480, 1995.	
	10	R. DEVILLERS, et al, "General response time computation for the deadline driven scheduling of periodic tasks", Fundamenta Informaticae 34, 1999, p.1-21.	
	11	G. FOHLER, "Flexibility in Statically Scheduled Hard Real-Time Systems", Ph.D. thesis, Institute fur Technische Informatik, TUW, Austria, Apr. 1994, p.1-101.	
	12	G. FOHLER, et al, "Heuristic Scheduling for Distributed Hard Real-Time Systems", Research Report 12/1990, Institute fur Technische Informatik, TUW, Austria, 1990, p.1-19.	
	13	G. FOHLER, "Joint scheduling of distributed complex periodic and hard aperiodic tasks in statically scheduled systems", 16 th IEEE RTSS'95, Dec. 1995, p.152-161.	
	14	R. GERBER, et al, "Guaranteeing real-time requirements with resource-based calibration of periodic processes", IEEE Trans. On Software Eng. 21, 7, July 1995, p.579-592.	
	15	J. GOOSSENS, et al, "The non-optimality of the monotonic priority assignments for hard real-time offset free systems", Real-Time Systems, Vol. 13, 1997, p.107-126.	
	16	M. IWASAKI, et al, "Isochronous Scheduling and its Application to Traffic Control", 19 th IEEE Real-Time Systems Symposium, December 1998.	
	17	K. JEFFAY, et al, "On non-preemptive scheduling of periodic and sporadic tasks", Proc. 12 th IEEE Real-Time Systems Symposium (RTSS'91), 1991, p.129-139.	
	18	H. KOPETZ, et al., "Distributed fault tolerant real-time systems: the MARS approach", IEEE Micro, Feb. 1989, p.25-40.	

Examiner Signature	Date Considered
-----------------------	--------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08B (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449B/PTO		Complete if Known			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/336,990		
		Filing Date	06/21/1999		
		First Named Inventor	Jia Xu		
		Group Art Unit	2156		
		Examiner Name	Kenneth Tang		
Sheet	3	of	3	Attorney Docket Number	

RECEIVED
FEB 03 2003
Technology Center 2100

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	19	E.L. LAWLER, et al, "Scheduling periodically occurring tasks on multiple processors", Information Processing Letters, 12, 1, 1981, p.9-12.	
	20	D. W. LEINBAUGH, "Guaranteed response time in a hard real-time environment," IEEE Trans. Software Eng., vol SE-6, Jan. 1980, p.85-91.	
	21	J. Y.-T. LEUNG, et al, "A note on preemptive scheduling of periodic, real-time tasks," Information Processing Letters, vol. 11, Nov. 1980.	
	22	J. Y.-T. LEUNG, et al, "On the complexity of fixed-priority scheduling of periodic, real-time tasks", Performance Evaluation, 2, 1982, p.115-118.	
	23	M. A. LIVANI, et al, "EDF consensus on CAN bus access for dynamic real-time applications", 19th IEEE RTSS'98, December 1998.	
	24	C. D. LOCKE, "Software architecture for hard real-time applications: cyclic executives vs. fixed priority executives," Real-Time Systems, 4, 37-53, 1992.	
	25	G. MANIMARAN, et al, "A new approach for scheduling of parallelizable tasks in real-time multiprocessor systems", Real-Time Systems, 15, 1998, p.39-60.	
	26	A. K. MOK, "Fundamental Design Problems of Distributed Systems for the Hard-Real-Time Environment", Ph.D Thesis, MIT, Cambridge, Massachusetts, May 1983, p.1-183.	
	27	S. POLEDNA, et al, "ERCOS: an operating system for automotive applications", SAE International Congress, Detroit, SAE Press, 1996, p.1-11.	
	28	J.A. STANKOVIC, et al, "Deadline Scheduling For Real-Time Systems: EDF and Related Algorithms", Ch. 5, "Planning-Based Scheduling", Kluwer, 1998, p.87-120.	
	29	A.D. STOYENKO, et al, "Analyzing hard-real-time programs for guaranteed schedulability", IEEE Trans. On Software Eng., 17, 8, Aug. 1991, p.737-750.	
	30	J. K. STROSNIDER, et al, "The deferrable server algorithm for enhanced aperiodic responsiveness in hard real-time environments," IEEE Trans. Computers, 44, 1995, p.73-91.	
	31	A.J. WELLINGS, et al, "Real-Time Scheduling in a Generic Fault-Tolerant Architecture", Proc. IEEE Real-Time Systems Symposium (RTSS'98), Dec. 1998.	
	32	W. ZHAO, et al, "Scheduling tasks with resource requirements in hard real-time systems," IEEE Trans. on Software Engineering, vol. SE-13, May 1987.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.